AMENDMENTS

In the Claims

1.   **(Currently Amended)** A method comprising:

detecting a failure of a first link, wherein

> said first link is between a network element and an upstream portion of a communications network, and

> said first link is associated with a virtual network; and

in response to said detecting, maintaining a communications channel between said downstream portion of said communications network and said upstream portion of said communications network by disabling a port of said network element coupled to a second link between said network element and a downstream portion of said communications network, wherein

> said second link is associated with said virtual network, ~~and~~

> said port of said network element is disabled as a result of

>> said port being associated with said virtual network**, and**

>> **a bandwidth, between the upstream portion of the communications network and the network element, falling below a predetermined threshold as a result of the failure of the first link**.

2.   (Original) The method of claim 1, wherein

said downstream portion of said communications network comprises a redundantly-linked network element.

3.   (Original) The method of claim 2, wherein

said redundantly-linked network element comprises a protocol stack including a first protocol stack layer and a second protocol stack layer,

said first protocol stack layer is associated with one or more applications, and

said disabling comprises notifying said second protocol stack layer of said failure.

4.   (Original) The method of claim 3, wherein

said network element comprises a primary network element,

said method further comprises enabling a third link between said redundantly-linked network element and a secondary network element, and

said secondary network element is coupled to said upstream portion of said communications network using a fourth link.

5.   (Original) The method of claim 2, wherein said redundantly-linked network element comprises a multi-homed endstation.

6.   (Original) The method of claim 2, wherein said network element comprises a datalink layer network element.

7.   (Original) The method of claim 6, wherein said datalink layer network element comprises an Ethernet switch.

8.   (Original) The method of claim 2, wherein said upstream portion of said communications network comprises a network layer network element.

9.   (Original) The method of claim 2, wherein said disabling comprises:

disabling a plurality of links between said network element and a plurality of redundantly-linked network elements.

10.   (Original) The method of claim 2, wherein said disabling comprises:

disabling a link of a plurality of links between said network element and a plurality of redundantly-linked network elements.

11.   (Cancelled)

12.   (Cancelled)

13.   (Previously Presented) The method of claim 2, wherein said disabling comprises:

disabling said port of said network element coupled to said second link between said network element and said downstream portion of said communications network

within a period of time substantially less than or equal to 50 milliseconds of said detecting.

14.   (Previously Presented) The method of claim 2, wherein said disabling comprises:

disabling said port of said network element coupled to said second link between said network element and said downstream portion of said communications network within a period of time substantially less than or equal to 2 seconds of said detecting.

15.   **(Currently Amended)** An apparatus comprising:

means for detecting a failure of a first link, wherein

said first link is between a network element and an upstream portion of a communications network, and

said first link is associated with a virtual network; and

means for maintaining a communications channel between said downstream portion of said communications network and said upstream portion of said communications network by disabling a port of said network element coupled to a second link between said network element and a downstream portion of said communications network, in response to said failure, wherein

said second link is associated with said virtual network, ~~and~~

said port of said network element is disabled as a result of

said port being associated with said virtual network<u>, and</u>

<u>a bandwidth, between the upstream portion of the communications network and the network element, falling below a predetermined threshold as a result of the failure of the first link</u>.

16.   (Original) The apparatus of claim 15, wherein

said downstream portion of said communications network comprises a redundantly-linked network element.

17.   (Original) The apparatus of claim 16, wherein

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said redundantly-linked network element comprises a protocol stack including a first protocol stack layer and a second protocol stack layer,

said first protocol stack layer is associated with one or more applications, and

said means for disabling comprises means for notifying said second protocol stack layer of said failure.

18. (Original) The apparatus of claim 17, wherein

said network element comprises a primary network element,

said apparatus further comprises means for enabling a third link between said redundantly-linked network element and a secondary network element, and

said secondary network element is coupled to said upstream portion of said communications network using a fourth link.

19. (Original) The apparatus of claim 16, wherein said redundantly-linked network element comprises a multi-homed endstation.

20. (Original) The apparatus of claim 16, wherein said means for disabling comprises:

means for disabling a link of a plurality of links between said network element and a plurality of redundantly-linked network elements.

21. (Cancelled)

22. (Cancelled)

23. (Previously Presented) The apparatus of claim 16, wherein said means for disabling comprises:

means for disabling said port of said network element coupled to said second link between said network element and said downstream portion of said communications network within a period of time substantially less than or equal to 50 milliseconds of said failure.

24. (Previously Presented) The apparatus of claim 16, wherein said means for disabling comprises:

means for disabling port of said network element coupled to said said second link between said network element and said downstream portion of said communications network within a period of time substantially less than or equal to 2 seconds of said failure.

25.   **(Currently Amended)**   A machine-readable storage medium having a plurality of instructions executable by a machine embodied therein, wherein said plurality of instructions when executed cause said machine to perform a method comprising:

  detecting a failure of a first link, wherein

    said first link is between a network element and an upstream portion of a communications network, and

    said first link is associated with a virtual network; and

  in response to said detecting, maintaining a communications channel between said downstream portion of said communications network and said upstream portion of said communications network by disabling a port of said network element coupled to said second link between said network element and a downstream portion of said communications network, wherein

    said second link is associated with said virtual network, ~~and~~

    said port of said network element is disabled as a result of

      said port being associated with said virtual network__, and__

      __a bandwidth, between the upstream portion of the communications network and the network element, falling below a predetermined threshold as a result of the failure of the first link__.

26.   (Previously Presented) The machine-readable storage medium of claim 25, wherein

  said downstream portion of said communications network comprises a redundantly-linked network element.

27.   (Previously Presented) The machine-readable storage medium of claim 26, wherein

  said redundantly-linked network element comprises a protocol stack including a first protocol stack layer and a second protocol stack layer,

said first protocol stack layer is associated with one or more applications, and

said disabling comprises notifying said second protocol stack layer of said failure.

28.   (Previously Presented) The machine-readable storage medium of claim 27, wherein

said network element comprises a primary network element,

said method further comprises enabling a third link between said redundantly-linked network element and a secondary network element, and

said secondary network element is coupled to said upstream portion of said communications network using a fourth link.

29.   (Previously Presented) The machine-readable storage medium of claim 26, wherein said redundantly-linked network element comprises a multi-homed endstation.

30.   (Previously Presented)   The machine-readable storage medium medium of claim 26, wherein said disabling comprises:

disabling a link of a plurality of links between said network element and a plurality of redundantly-linked network elements.

31.   (Cancelled)

32.   (Cancelled)

33.   (Previously Presented) The machine-readable storage medium of claim 26, wherein said disabling comprises:

disabling said port of said network element coupled to said second link between said network element and said downstream portion of said communications network within a period of time substantially less than or equal to 50 milliseconds of said detecting.

34.   (Previously Presented) The machine-readable storage medium of claim 26, wherein said disabling comprises:

disabling said port of said network element coupled to said second link between said network element and said downstream portion of said communications network

within a period of time substantially less than or equal to 2 seconds of said detecting.

35.   **(Currently Amended)** A data processing system comprising:

a redundantly-linked endstation; and

a network element configured to

detect a failure of a first link, wherein

said first link is between said network element and an upstream portion of a communications network, and

said first link is associated with a virtual network, and

in response to said failure, maintain a communications channel between said redundantly-linked endstation and said upstream portion of said communications network by disabling a port of said network element coupled to said second link between said network element and said redundantly-linked endstation, wherein

said second link is associated with said virtual network, ~~and~~

said port of said network element is disabled as a result of

said port being associated with said virtual network, **and**

a bandwidth, between the upstream portion of the communications network and the network element, falling below a predetermined threshold as a result of the failure of the first link.

36.   (Original) The data processing system of claim 35, wherein

said network element comprises a primary network element,

said redundantly-linked endstation is configured to enable a third link between said redundantly-linked endstation and a secondary network element, and

said secondary network element is coupled to said upstream portion of said communications network using a fourth link.

37.   (Original) The data processing system of claim 35, wherein

said network element comprises an Ethernet switch.

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38.   **(Currently Amended)** A data processing system comprising:

a redundantly-linked endstation;

a primary network element, wherein

> said primary network element is coupled to an upstream portion of a communications network using a first link, wherein said first link is associated with a virtual network,

> said primary network element is coupled to said redundantly-linked endstation using a second link, wherein said second link is associated with said virtual network, and

> said primary network element is configured to

>> detect a failure of said first link, and

>> disable a port of said primary network element coupled to said second link to maintain a communications channel between said redundantly-linked endstation and said upstream portion of said communications network in response to said failure, ~~and~~

>> said port of said primary network element is disabled as a result of

>>> said port being associated with said virtual network, **and**

>>> **a bandwidth, between the upstream portion of the communications network and the network element, falling below a predetermined threshold as a result of the failure of the first link**; and

a secondary network element, wherein

> said secondary network element is coupled to said redundantly-linked endstation using a third link.

39.   (Original) The data processing system of claim 38, wherein

said redundantly-linked endstation is configured to enable said third link, and

> said secondary network element is coupled to said upstream portion of said communications network using a fourth link.

40.   (Original) The data processing system of claim 38, wherein

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said primary network element comprises an Ethernet switch.

41.   (Original) The method of claim 1, wherein said second link is a downstream link that is individually predetermined by a configuration interface.

42.   (Original) The apparatus of claim 15, wherein said second link is a downstream link that is individually predetermined by a configuration interface.

43.   (Original) The machine-readable storage medium of claim 25, wherein said second link is a downstream link that is individually predetermined by a configuration interface.

44.   (Original) The data processing system of claim 35, wherein said second link is a downstream link that is individually predetermined by a configuration interface.

45.   (Original) The data processing system of claim 38, wherein said second link is a downstream link that is individually predetermined by a configuration interface.

46.   (Cancelled)

47.   (Cancelled)

48.   (Cancelled)

49.   (Cancelled)

50.   (Cancelled)

51.   (Previously Presented) The method of claim 1, wherein said disabling further comprises:
        disabling said port of said network element coupled to said second link on-demand, in response to analyzing a plurality of system attributes.

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52.   (Previously Presented)   The apparatus of claim 15, wherein said means for disabling further comprises:

means for disabling said port of said network element coupled to said second link on-demand, in response to analyzing a plurality of system attributes.

53.   (Previously Presented)   The machine-readable storage medium of claim 25, wherein said disabling further comprises:

disabling said port of said network element coupled to said second link on-demand, in response to analyzing a plurality of system attributes.

54.   (Previously Presented)   The data processing system of claim 35, wherein said network element is further configured to:

disable said port of said network element coupled to said second link on-demand, in response to an analysis of a plurality of system attributes.

55.   (Previously Presented)   The data processing system of claim 38, where said primary network element is further configured to:

disable said port of said primary network element coupled to said second link on-demand, in response to an analysis of a plurality of system attributes.

56.   (Previously Presented) The method of claim 2, further comprising:

said redundantly-linked network element failing back to said second link when said first

link and said second link become operational again.

57.   (Previously Presented) The apparatus of claim 16, further comprising:

means for failing back said redundantly-linked network element to said second link when

said first link and said second link become operational again.

58.   (Previously Presented) The machine-readable storage medium of claim 26, wherein said method further comprises:

said redundantly-linked network element failing back to said second link when said first

link and said second link become operational again.

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59.   (Previously Presented) The data processing system of claim 35, wherein said redundantly-linked endstation is configured to fail back to said second link when said first link and said second link become operational again.

60.   (Previously Presented) The data processing system of claim 38, wherein said redundantly-linked endstation is configured to fail back to said second link when said first link and said second link become operational again.